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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/816,806 | 04/02/2004 | Hideaki Tsutsumi | S1459.70087US00 | 9947 |

7590 08/04/2006

Randy J. Pritzker
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, MA 02210

EXAMINER

KAYRISH, MATTHEW

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2627

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------------|--|--|
| Office Action Summary | Application No. 10/816,806 | Applicant(s) TSUTSUMI ET AL. | |
| | Examiner Matthew G. Kayrish | Art Unit 2627 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 6 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Inoue (US Patent Number 6898795).

Regarding claims 1 and 6, Inoue discloses:

A disc driving apparatus for use with a disc cartridge comprising:

A disc-shaped recording medium (figure 24, item D), an inner rotor (figure 24, item 4), a shutter (figure 24, items 9 & 10) and a housing (figure 23, item 1) in which an aperture (figure 23, item 5) is formed, said aperture opened or closed by said shutter (figure 24, item 4d) by rotation of said inner rotor (column 14, lines 26-43), said disc driving apparatus comprising:

A loading mechanism (figure 38, item 64) for causing movement of said disc cartridge between a pull-out position (position of figure 38) in which the disc cartridge is pulled out to outside a main body unit (figure 38, item 61) of the apparatus and a housed position (position of figure 40) in which the disc cartridge is housed within said main body unit of the apparatus (figure 40); and

A shutter opening/closing mechanism for opening/closing said shutter (figure 24, item 4d) by rotating said inner rotor of said disc cartridge (column 14, lines 26-43) moved by said loading mechanism (figure 38, item 64) between said pull-out position (position of figure 38) and said housed position (position of figure 40) to effect opening/closure of said shutter (column 15, lines 54-65);

Said shutter opening/closing mechanism comprising:

A base (figure 28, item 71) relatively movable along one lateral surface of said housing (figure 38, indicated by arrow p);

A first engagement member (figure 20, item 72) provided to one end of said base for engaging with a first mating engagement section (figure 28, item 26) provided to an outer rim of said inner rotor facing outwards from a lateral side of said housing when said shutter is closed (figure 28, item 26);

A second engagement member (figure 20, item 75) provided to an other end of said base for engaging with a second mating engagement (figure 28, item 28) section provided to the outer rim of said inner rotor facing outwards from a lateral side of said housing when said shutter is opened (figure 32, item 28); and

A rack member (figure 28, item 74) mounted between said first engagement member and said second engagement member of said base for meshing (figures 30 & 31) with a gear (figure 28, item 27) provided in a preset area of the outer rim of said inner rotor between said first mating engagement section and said second mating engagement section (figure 24);

Said first engagement member and the said second engagement member being mounted to said base so that distal ends thereof are movable in a direction perpendicular (figure 20, arrows g & h) to a direction along one lateral surface of said housing and pivotable (figure 18, arrows g & h) along said one lateral surface of said housing.

Regarding claims 2 and 7, Inoue discloses:

The shutter opening/closing mechanism according to claim 1 further comprising:

A first torsion coil spring (figure 20, item 78) and a second torsion coil spring (figure 20, item 79) each having a coiled part of a wire retained by said base (figure 20, springs are retained by base), with one end of the coiled part of the wire retained by said base and an other end resiliently movable in a direction perpendicular to a direction along one lateral surface of said housing (figure 20, arrows g & h);

Said first engagement member and said second engagement member being retained by holders (figure 20, springs & engagement members are retained in holders) provided to said base with distal ends of the first engagement member and the second engagement member protruded from said holders (figure 20, slot where springs are held) towards one lateral surface of said housing and with proximal ends thereof biased by opposite ends of said first torsion coil spring and said second torsion coil spring (figure 20, items 72 & 75 are outwardly biased).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-5 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue, in view of Ezawa et al (US Patent Number 6813236).

Regarding claims 3 and 8, Inoue fails to disclose:

A shutter opening/closing mechanism with a rack member mounted to a base so that said rack member is moved in a direction perpendicular to a direction along said lateral surface of said housing.

Regarding claims 4 and 9, Inoue fails to disclose:

The shutter opening/closing mechanism according to claim 3 further comprising:

Biassing means for biasing said rack member towards said lateral surface of a housing;

And wherein said rack member is retained by a holder provided to said base and biased by said biasing means for protruding from said holder towards a lateral surface of said casing.

Regarding claims 5 and 10, Inoue fails to disclose:

The shutter opening/closing mechanism according to claim 4 wherein said biasing means includes a compression coil spring arranged between said rack member and the holder of said base.

Regarding claims 3 and 8, Ezawa et al disclose:

An opening/closing/transport mechanism with a rack member (figure 15A, item 103) mounted to a base (figure 15B, item 101R) so that said rack member is moved in a direction perpendicular to a direction along said lateral surface of a housing (column 1, lines 40-44).

Regarding claims 4 and 9, Ezawa et al disclose:

The opening/closing/transport mechanism according to claim 3 further comprising:

Biassing means for biassing said rack member towards said lateral surface of said housing (column 1, lines 40-41);

And wherein said rack member is retained by a holder (figure 15B, item 1001) provided to said base and biased by said biassing means for protruding from said holder towards a lateral surface of said casing (column 1, lines 40-44).

Regarding claims 5 and 10, Ezawa et al disclose:

The opening/closing/transport mechanism according to claim 4 wherein said biassing means includes a compression coil spring (figure 15B, item 106) arranged between said rack member and the holder of said base (figure 15B, spring is between the housing and the rack slider).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Inoue with a compression spring to press his rack gear toward the rotating gear of the housing, as taught by Ezawa et al, because this compression spring will continuously press the rack gear towards the cartridge holder as the cartridge is loaded

into the housing. Over time, wear and tear can cause the teeth of the gear to wear down and eventually they will not be able to contact the gear of the cartridge. With a compression spring provided on the holder to bias the rack gear towards the inner rotor gear, even after the wear and tear, it can be assured that the rack gear and the inner rotor gear will still contact and ultimately, open the shutter.

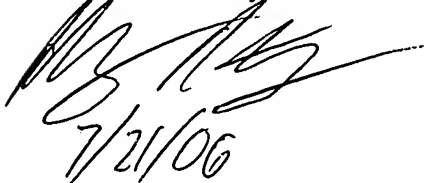
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew G. Kayrish whose telephone number is 571-272-4220. The examiner can normally be reached on 8am - 5pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

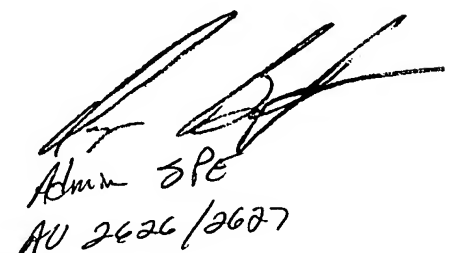
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Matthew G. Kayrish

7/21/2006



7/21/06



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